IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended): A relay apparatus for a terminal or a server on a private network that does not have an address on a global network to perform communication through the global network, comprising:

a WAN interface unit which provides communication with the global network;

a LAN interface unit which provides communication with the private network;

an access control unit having means for controlling access from the global network to the private network in accordance with an access control rule which is established on a per sending device basis or on a per sending network basis;

an address translation unit including,

means for translating an address in accordance with an address translation rule, in order to transfer information from a terminal on the global network to a terminal on the private network, and

means for translating an address in accordance with a rule established on a per sending device basis, in order to transfer information from a terminal on the private network to a terminal on the global network; and

a database unit which records the access control rule and the address translation rule, wherein

the address translation rule associates dictates a translation using a combination of a sending device address on the global network and destination address of the relay apparatus on the global network to translate the destination address of the relay apparatus on the global network to with a destination addresses of the terminal or server on the private network, and

if a combination of the sending device address and destination address included in [[of]] [[the]] a packet received at the WAN interface unit matches is identical to the combination of

the sending device address on the global network and destination address of the relay apparatus on the global network [[of]] included in the address translation rule, the address translation unit translates the destination address of the packet received at the WAN to the destination address of the terminal or server on the private network.

2. (Previously Presented): The relay apparatus according to Claim 1, comprising:

an authentication unit which performs authentication in response to a request for access permission sent from a terminal on the global network, wherein:

the database unit further records user information used by the authentication unit to perform authentication;

wherein the access control unit further includes,

means for adding an access control rule established on a per sending device basis or a per sending network basis to the database unit if the authentication succeeds, and

means for deleting the added access control rule from the database unit when a predetermined criterion for ending communication is satisfied; and

the address translation unit further includes,

means for adding an address translation rule which sets the terminal on the global network as the sending device to the database unit if the authentication succeeds, and

means for deleting the added address translation rule from the database unit when a predetermined criterion for ending communication is satisfied.

3. (Previously Presented): The relay apparatus according to Claim 1, wherein:

the access control unit further includes,

means for adding an access control rule established on a per sending device basis or on a per sending network basis to the database unit in response to a request from an authentication sever which performs authentication of a terminal on the global network, and

means for deleting the added access control rule from the database unit when a predetermined criterion for ending communication is satisfied; and

the address translation unit further includes,

means for adding an address translation rule which sets the terminal on the global network as the sending device to the database unit in response to a request from the authentication server, and

means for deleting the added address translation rule from the database unit when a predetermined criterion for ending communication is satisfied.

4. (Previously Presented): An authentication server which permits access to the relay apparatus according to Claim 3, comprising:

an interface unit which provides communication with a terminal on the global network and the relay apparatus;

an authentication unit which performs authentication in response to a request for permission to access the relay apparatus from a terminal on the global network;

a control unit including,

means for requesting the relay apparatus to add an access control rule and an address translation rule which sets the terminal on the global network as the sending device for a packet from the terminal on the global network if authentication at the authentication unit succeeds, and

means for requesting the relay apparatus to delete the added access control rule and address translation rule when a predetermined criterion for ending communication is satisfied; and

a database unit which records information associating user information used by the authentication unit to perform authentication with an access control rule and address translation rule requested to be added.

5. (Previously Presented): The relay apparatus according to Claim 1, wherein:

the access control unit further includes,

means for adding an access control rule established on a per sending device basis to the database unit in response to a request for initiating communication from a terminal on a private network, and

means for deleting the added access control rule from the database unit when a predetermined criterion for ending communication is satisfied; and

the address translation unit further includes,

means for adding a rule established on a per sending device basis to the database unit in response to a request for initiating communication from a terminal on the private network, and

means for deleting the added rule from the database unit when a predetermined criterion for ending communication is satisfied.

6. (Currently Amended): An address translation apparatus for a terminal or a server on a private network that does not have an address on a global network to perform communication through the global network, comprising:

a WAN interface unit which provides communication with the global network;

a LAN interface unit which provides communication with the private network;

an address translation unit including,

means for translating an address in accordance with an address translation rule, in order

to transfer information from a terminal on the global network to a terminal on the private

network, and

means for translating an address in accordance with a rule established on a per sending

device basis, in order to transfer information from a terminal on the private network to a

terminal on the global network; [[and]]

a database unit for recording the address translation rule, wherein

the address translation rule associates dictates a translation using a combination of a

sending device address on the global network and destination address of the address translation

apparatus on the global network to translate the destination address of the address translation

apparatus on the global network to with a destination addresses of the terminal or server on the

private network, and

if a combination of the sending device address and destination address included in [[of]]

[[the]] a packet received at the WAN interface unit matches is identical to the combination of

the sending device address on the global network and destination address of the address

translation apparatus on the global network [[of]] included in the address translation rule, the

address translation unit translates the destination address of the packet received at the WAN to

the destination address of the terminal or server on the private network.

7. (Previously Presented): The address translation apparatus according to Claim 6,

wherein

the address translation unit further includes,

means for adding an address translation rule which sets the terminal on the global network as the sending device to the database unit in response to a request for initiating communication sent from a terminal on the global network,

means for deleting the added address translation rule from the database unit when a predetermined criterion for ending communication is satisfied,

means for adding a rule established on a per sending device basis to the database unit in response to a request for initiating communication sent from a terminal on the private network, and

means for deleting the added rule from the database unit when a predetermined criterion for ending communication is satisfied.

8. (Previously Presented): The address translation apparatus according to Claim 7, comprising:

an authentication unit which performs authentication in response to a request for initiating communication from a terminal on the global network, wherein:

the database unites further records user information used by the authentication unit to perform authentication, and

the address translation unit adds the address translation rule which sets the terminal on the global network as the sending device to the database unit in response to a request for initiating communication from a terminal on the global network only if the authentication succeeds.

9. (Previously Presented): The address translation apparatus according to Claim 7, wherein the address translation unit adds the address translation rule which sets the terminal on the global network as the sending device to the database unit in response to a request for

initiating communication from a terminal on the global network only if an authentication

server which performs authentication requests the addition.

10. (Previously Presented): An authentication server which permits access to the

address translation apparatus according to Claim 9, comprising:

an interface unit which provides communication with a terminal on the global network

and the address translation apparatus;

an authentication unit which performs authentication in response to a request for

permission to access the address translation apparatus from a terminal on the global network;

a control unit including,

means for requesting the address translation apparatus to add an address translation rule

which sets the terminal on the global network as the sending device if authentication at the

authentication unit succeeds, and

means for requesting the address translation apparatus to delete the added address

translation rule when a predetermined criterion for ending communication is satisfied; and

a database unit which records user information used by the authentication unit to perform

authentication.

11-14. (Canceled).

15. (Previously Presented): The relay apparatus according to Claim 1, wherein

the access control rule and the address translation rule have a condition with the IP

address of the sending device or the IP address of the sending network.

16. (Previously Presented): The relay apparatus according to Claim 15, comprising:

an authentication unit which performs authentication in response to a request for access

permission sent from a terminal on the global network, wherein:

the database unit further records user information used by the authentication unit to

perform authentication;

the access control unit further includes,

means for adding an access control rule established on a per sending device basis or a per

sending network basis to the database unit if the authentication succeeds, and

means for deleting the added access control rule from the database unit when a

predetermined criterion for ending communication is satisfied; and

the address translation unit further includes,

means for adding an address translation rule which sets the terminal on the global

network as the sending device to the database unit if the authentication succeeds, and

means for deleting the added address translation rule from the database unit when a

predetermined criterion for ending communication is satisfied.

17. (Previously Presented): The address translation apparatus according to Claim 6,

wherein

the address translation rule has a condition with the IP address of the sending device or

the IP address of the sending network.

18. (Previously Presented): The address translation apparatus according to Claim 17,

wherein

the address translation unit further includes,

means for adding an address translation rule which sets the terminal on the global

network as the sending device to the database unit in response to a request for initiating

communication sent from a terminal on the global network,

means for deleting the added address translation rule from the database unit when a

predetermined criterion for ending communication is satisfied,

means for adding a rule established on a per sending device basis to the database unit in

response to a request for initiating communication sent from a terminal on a private network,

and

means for deleting the added rule from the database unit when a predetermined criterion

for ending communication is satisfied.

19-20. (Canceled).

21. (Currently Amended): An address translation method, implemented by an address

translation apparatus, for a terminal or server on a private network that does not have an

address on a global network to perform communication through the global network,

comprising:

recording an address translation rule associating dictating a translation using a

combination of a sending device address on the global network and destination address of the

address translation apparatus on the global network to translate the destination address of the

address translation apparatus on the global network to with a destination address of the

terminal or server on the private network in a database unit beforehand;

when receiving,a packet from the global network is received by a WAN interface unit,

of the address translation apparatus, a packet from the global network;

~~translating, by an address translation unit, a destination of the packet to the destination on the private network, if the sending device and destination of the packet received at the WAN interface unit matches the sending device and destination on the global network of the address translation rule, and~~

if a combination of the sending device address and destination address included in the packet received at the WAN interface unit is identical to the combination of the sending device address on the global network and destination address of the address translation apparatus on the global network included in the address translation rule, translating, at the address translation apparatus, the destination address of the packet received at the WAN to the destination address of the terminal or server on the private network; and

transferring, by a LAN interface unit, the packet having the translated address to the private network;

when a packet from the private network is received by [[a]] the LAN interface unit,

translating, by the address translation unit, a source address in accordance with the a rule established on a per sending device basis,[[;]] and

transferring, by the WAN interface unit, the packet having the translated address in accordance with the rule established on the per sending device basis to the global network.

22. (Currently Amended): An address translation method, implemented by an address translation apparatus, for a terminal or server on a private network that does not have an address on a global network ~~to perform communication through the global network~~, comprising:

recording an address translation rule ~~associating~~ dictating a translation using a combination of a sending device address on the global network and destination address of the

address translation apparatus on the global network to translate the destination address of the

address translation apparatus on the global network to ~~with~~ a destination address of the

terminal or server on the private network in a database unit ~~beforehand~~;

> receiving a packet at the address translation apparatus;

> performing authentication in an authentication unit,

> if the authentication succeeds, checking, by the address translation ~~unit~~ apparatus, the

database unit to see whether or not [[an]] the address translation rule whose combination of the

sending device address on the global network and the destination address of the address

translation apparatus on the global network ~~matches~~ that is identical to a combination of a

sending device address and destination address [[of]] included in the packet ~~is stored in the~~

~~database unit~~ received by the address translation apparatus,

> if ~~a matching~~ the address translation rule [[is]] found in the database unit includes a

combination of the sending device address on the global network and the destination address of

the address translation apparatus on the global network is identical to the combination of the

sending device address and the destination address included in the packet received by the

address translation apparatus, translating the destination address included in [[of]] the packet to

the destination address of the terminal or server on the private network in accordance with the

address translation rule, and

> if ~~a matching address~~ the translation rule ~~is not~~ found in the database unit does not

include a combination of the sending device address on the global network and the destination

address of the address translation apparatus on the global network that is identical to the

combination of the sending device address and the destination address included in the packet

received by the address translation apparatus, adding [[an]] a new address translation rule to

the database unit and translating the destination address included in [[of]] the packet to the

destination address of the terminal or server on the private network in accordance with the

~~added~~ new address translation rule; and

transferring, by a LAN interface unit, the packet having the translated address to the

private network;

when a packet from the private network is received by the LAN interface unit,

checking, by the address translation ~~unit~~apparatus, the database unit to see

whether or not an address translation rule whose destination address on the private

network matches the sending device address of the packet received from the private

network is stored in the database unit, and

if a matching address translation rule for the packet received from the private

network is found in the database unit, translating the sending device address of the packet

received from the private network to an address on the global network of the WAN

interface ~~in accordance with the address translation rule~~,

if a matching address translation rule for the packet received from the private

network is not found in the database unit, adding [[an]] another address translation rule to

the database unit and translating the sending device address of the packet received from

the private network to an address on the global network of the WAN interface in

accordance with the ~~added~~ another address translation rule,[[;]]

transferring by the WAN interface unit the packet received from the private

network having the translated address to the global network,[[;]] and

if there is an address translation rule added ~~by the address translation unit~~ to the

database unit, deleting the added address translation rule from the database unit when a

predetermined criterion for ending communication is satisfied.

23. (Original): The address translation method according to Claim 22, wherein, instead of performing authentication in the authentication unit, determination is made that authentication is successful when a request is received from an authentication server which performs authentication of a terminal on the global network.

24-28. (Canceled)

29. (Currently Amended): An address translation apparatus for a terminal or a server on a private network that does not have an address on a global network to perform communication through the global network, comprising:

a WAN interface unit which provides communication with the global network;

a LAN interface unit which provides communication with the private network;

an address translation unit which translates an address in accordance with an address translation rule, in order to transfer information from a terminal on the global network to a terminal on the private network, and which translates an address in accordance with a rule established on a per sending device basis, in order to transfer information from a terminal on the private network to a terminal on the global network; [[and]]

a database unit which records the address translation rule and the rule, wherein

the address translation rule ~~associates~~ dictates a translation using a combination of a sending device address on the global network and destination address of the address translation apparatus on the global network to translate the destination address of the address translation apparatus on the global network to ~~with~~ a destination addresses of the terminal or server on the private network, and

if a combination of the sending device address and destination address included in [[of]] [[the]] a packet received at the WAN interface unit ~~matches~~ is identical to the combination of

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the sending device <u>address on the global network</u> and destination <u>address of the address</u>

<u>translation apparatus</u> on the global network [[of]] <u>included in</u> the address translation rule, the

address translation unit translates the destination <u>address</u> of the packet <u>received at the WAN</u> to

the destination <u>address of the terminal or server</u> on the private network.

Claim 30 (New). The relay apparatus of claim 1, wherein the sending device address on

the global network, the destination address of the relay apparatus on the global network, and

the destination address of the terminal or server on the private network are each expressed as

an IP address.

Claim 31 (New). The relay apparatus of claim 6, wherein the sending device address on

the global network, the destination address of the address translation apparatus on the global

network, and the destination address of the terminal or server on the private network are each

expressed as an IP address.

Claim 32 (New). The method of claim 21, wherein the sending device address on the

global network, the destination address of the address translation apparatus on the global

network, and the destination address of the terminal or server on the private network are each

expressed as an IP address.

Claim 33 (New). The method of claim 22, wherein the sending device address on the

global network, the destination address of the address translation apparatus on the global

network, and the destination address of the terminal or server on the private network are each

expressed as an IP address.

Claim 34 (New). The relay apparatus of claim 29, wherein the sending device address on the global network, the destination address of the address translation apparatus on the global network, and the destination address of the terminal or server on the private network are each expressed as an IP address.